

Amendment after Final Rejection
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REMARKS

Applicants thank Examiner Addie for the courtesy of a telephone interview with Applicants' attorney and Applicant Eric Humphries on June 5, 2006. The substance of that interview is contained within the remarks that follow.

In the present Office Action, claims 1, 4-6, 8-11, 13, 15-19, 21-23, 25, 27-31, 33-39 and 41-43 were examined. Claims 1, 4-6, 8-11, 13, 15-19, 21-23, 25, 27-31, 33-39 and 41-43 are rejected and no claims are allowed.

By this Amendment, claims 1, 17, 30 and 37 have been amended, claims 11, 13, 23 and 25 have been canceled, and no claims have been added. Accordingly, claims 1, 4-6, 8-10, 15-19, 21-22, 27-31, 33-39 and 41-43 are presented for further examination. No new matter has been added. By this Amendment, claims 1, 4-6, 8-10, 15-19, 21-22, 27-31, 33-39 and 41-43 are believed to be in condition for allowance.

The Invention

Applicants' invention as embodied in the independent claims, as amended, is drawn to a traffic noise barrier system having two portions. A first portion is a longitudinal barrier that has a front surface facing the path of traffic and configured to redirect an errant vehicle. As shown in Applicants' Figure 1, the longitudinal barrier 14 may be in the form of a Jersey barrier and include a sloped front surface to redirect the vehicle. The second component is a traffic noise barrier. As disclosed on page 5, line 14 of Applicants' specification, the traffic noise barrier 16 is spaced from the back surface of the longitudinal barrier.

One consideration for traffic noise barrier systems is the Zone of Intrusion as disclosed in Applicants' Specification at Page 2, lines 7 – 31. There is an envelope surrounding a barrier into which vehicle components intrude on impact of the vehicle with the barrier. While on a roadway

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of adequate width, a noise barrier may be offset from the longitudinal traffic redirecting portion by a distance sufficient to avoid the Zone of Intrusion. This solution is not available on a bridge deck or other location having a limited width. Applicants overcome this space limitation by using the longitudinal barrier to support the noise barrier. Traditional noise wall materials, such as concrete, are too heavy to enable support by conventional attachment to the longitudinal barrier and reinforced supports are too expensive.

As recited in Applicants' specification at page 9, lines 6-8, by spacing the traffic noise barrier 16 from the longitudinal barrier 14, there is less chance that a vehicle will impact the traffic noise barrier 16 and as a result less chance that the traffic noise barrier will snag the vehicle, generate debris which can fall down from a bridge surface and less chance of vehicle intrusion hazards due to impact of the vehicle with the traffic noise barrier. As embodied in the claims, this spacing is at least 30 inches (Claim 30) and typically at least 34 inches (Claims 1 and 17). Since the Zone of Intrusion may extend greater than 30 inches, Applicants' system may include secondary components such as cables to retain fragments. For example, see dependent Claims 9 and 10 as well as independent Claim 37.

Rejections under 35 USC §103

Applicants' claims, as amended, incorporate dependent claims into claims 1 and 17. These dependent claims were rejected under 35 USC 103 as unpatentable over Rerup et al. in view of Underhill et al. and Oberlander et al. further in view of Keller et al. This combination of references does not teach or suggest a spacing between a longitudinal traffic barrier and a supported noise barrier where the spacing is effective to minimize vehicle impact and thereby prevent snagging, debris and vehicle intrusion hazards.

U.S. Patent 5,406,039 to *Rerup, et al.* discloses a concrete noise barrier (*Rerup et al.* at column 6, line 43) that is supported by the ground (column 5, line 67). Figure 6 shows the

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concrete noise barrier offset from a longitudinal traffic deflecting barrier by an amount equivalent to spacer 56 of Figure 6, which is much less than the width of a Jersey barrier 26.

U.S. Patent No. 6,016,887 to *Underhill, et al.* discloses a traffic noise barrier being supported either by the ground (*Underhill et al.* at column 1, line 51) or by a longitudinal barrier (Figure 3). When the longitudinal barrier, a one inch spacing is disclosed in Figure 3.

U.S. Patent No. 5,040,352 to *Oberländer et al.* is owned by the parent company to the assignee of the present patent application and discloses fiber reinforced noise abatement walls.

The *Keller et al.* article is disclosed in Applicants' specification at Page 2, lines 8-10 and discloses the Zone of Intrusion and a concern with mounting attachments to traffic barrier within the Zone of Intrusion. However, the article's primary recommendation appears to be locating the attachment outside the Zone of Intrusion, which, as discussed above, is not practical on bridge decks and other surfaces of limited width. The article provides no solution to the Zone of Intrusion problem that suggests Applicants' invention.

There is nothing in the combination of references to teach or suggest a system for supporting a transparent noise barrier by a traffic deflecting barrier where the noise barrier is offset by a specified distance from the front of the traffic deflecting barrier. Rerup et al. disclose a concrete noise barrier that would be too heavy for support by a traffic deflecting barrier. Underhill et al. disclose a lightweight non-transparent barrier offset by one inch from the traffic deflecting barrier. Oberländer et al. disclose a transparent barrier, but not attached to a traffic deflecting barrier. Keller et al. disclose a Zone of Intrusion and problems with attachment of structures to traffic deflecting barrier within the Zone of Intrusion, but does not provide any motivation for combination with any of the other references cited herein to achieve Applicants' claimed system.

The Examiner cited the publication by Keller, et al., "Guidelines for Attachments to Bridge Rails and Medium Barriers" as disclosing a 32 inch New Jersey safety shape bridge rail

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in Table 2 (on page 7 of the publication). Applicants respectfully traverse this conclusion. Table A1, on page 53 of the *Keller, et al.* reference discloses a 32 inch New Jersey barrier as test conditions CS4. Figure A1 on page 55 discloses that the Jersey barrier has a height of 32 inches, a bottom width of 15 inches and a top width of 6 inches.

Recognizing that a Jersey barrier with a height of 32 inches has a maximum width of between 15 and 18 inches, it must be concluded that none of the references disclosed in the present application, either alone or in combination, teach or suggest the combination of a longitudinal traffic deflection barrier and a transparent noise barrier wall supported by that traffic deflection barrier and offset from the front of the traffic deflection barrier by at least 30 inches and more typically 34 inches. Applicants' claims should be allowed over the combination of references.

National Cooperative Highway Research Program (NCHRP) Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features", of record in the present patent application was briefly discussed during the telephone conference on June 5. This publication discloses methods to test roadway barrier and Appendix A, Section A3.4.2 discusses failure of longitudinal barriers, however, nothing in the publication teaches or suggests a traffic barrier system similar to that claimed by the Applicants.

Applicants' amendment incorporated the limitations of Claim 13 into Claim 1 and the limitations of Claim 25 into Claim 17 and more positively recited benefits of the claimed system. Accordingly, there are no new issues for the Examiner to search and the amendment is proper under the provisions of 37 CFR 1.116. Entry of the amendment and consideration of all claims on their merits is respectfully solicited.

Accordingly, Applicant submits that none of the references, alone or in combination, anticipate or make obvious the invention as presently claimed and that the application is now in condition for allowance. Therefore, Applicant respectfully requests reconsideration and further

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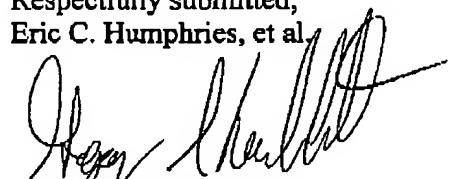
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examination of the application and the Examiner is respectfully requested to take such proper actions so that a patent will issue herefrom as soon as possible.

If the Examiner has any questions or believes that a discussion with Applicant's attorney would expedite prosecution, the Examiner is invited and encouraged to contact the undersigned at the telephone number below.

Please apply any credits or charge any deficiencies to our Deposit Account No. 23-1665.

Respectfully submitted,
Eric C. Humphries, et al.



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Date: June 7, 2006

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